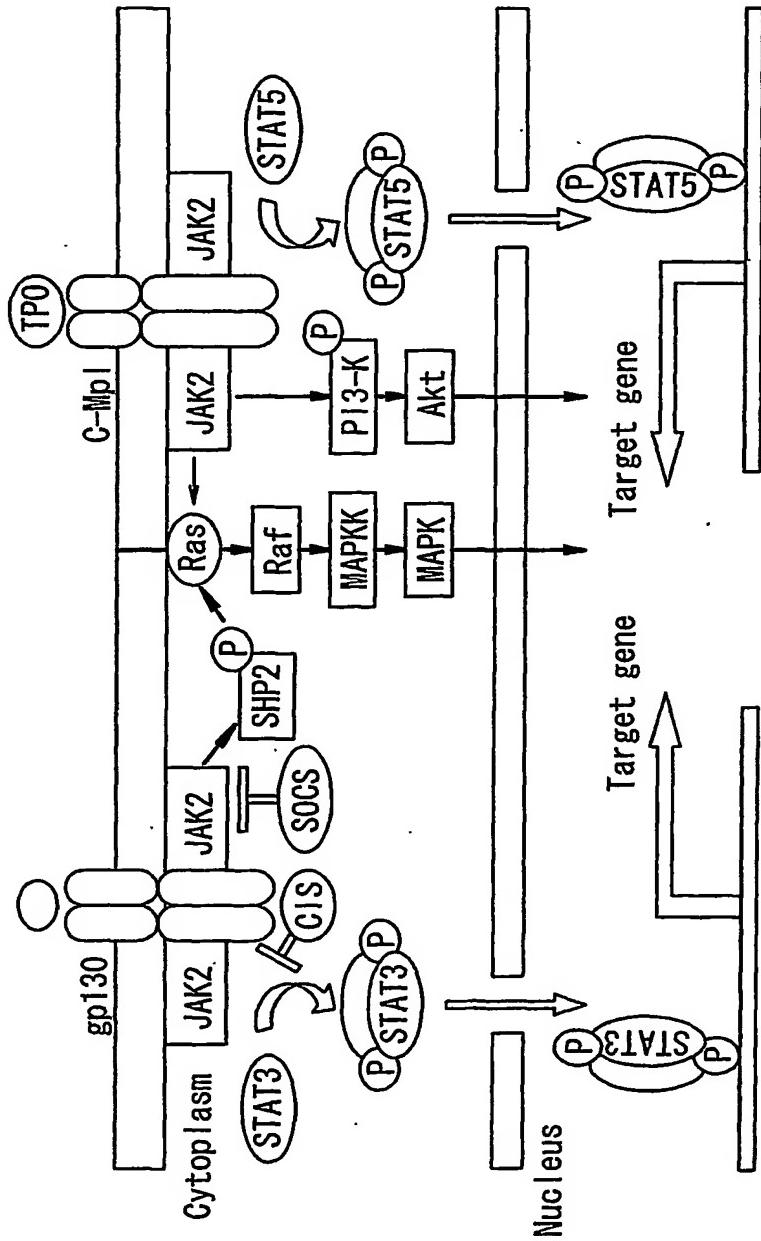
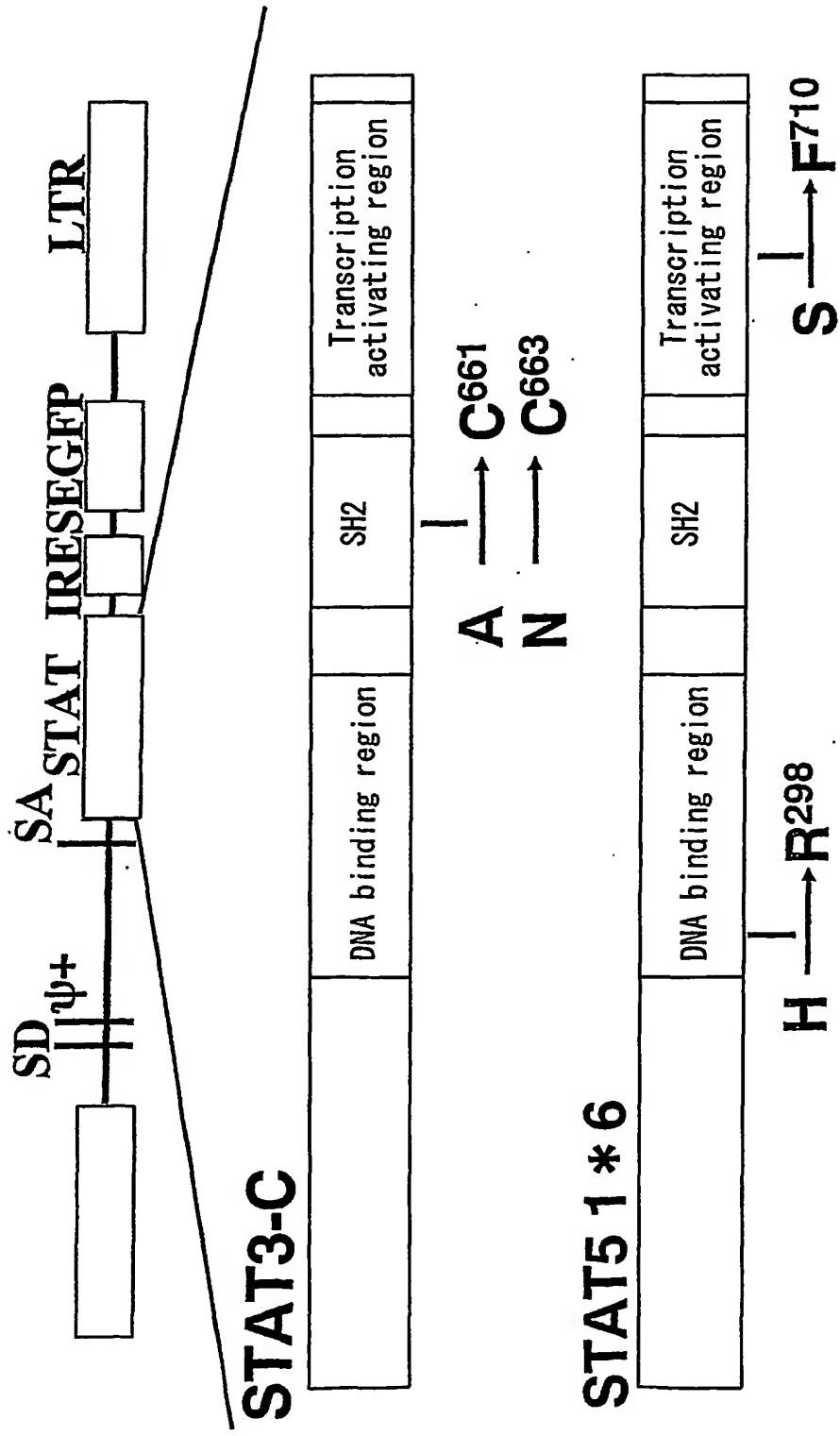


FIG. 1 Self-replication signal in hematopoietic stem cell



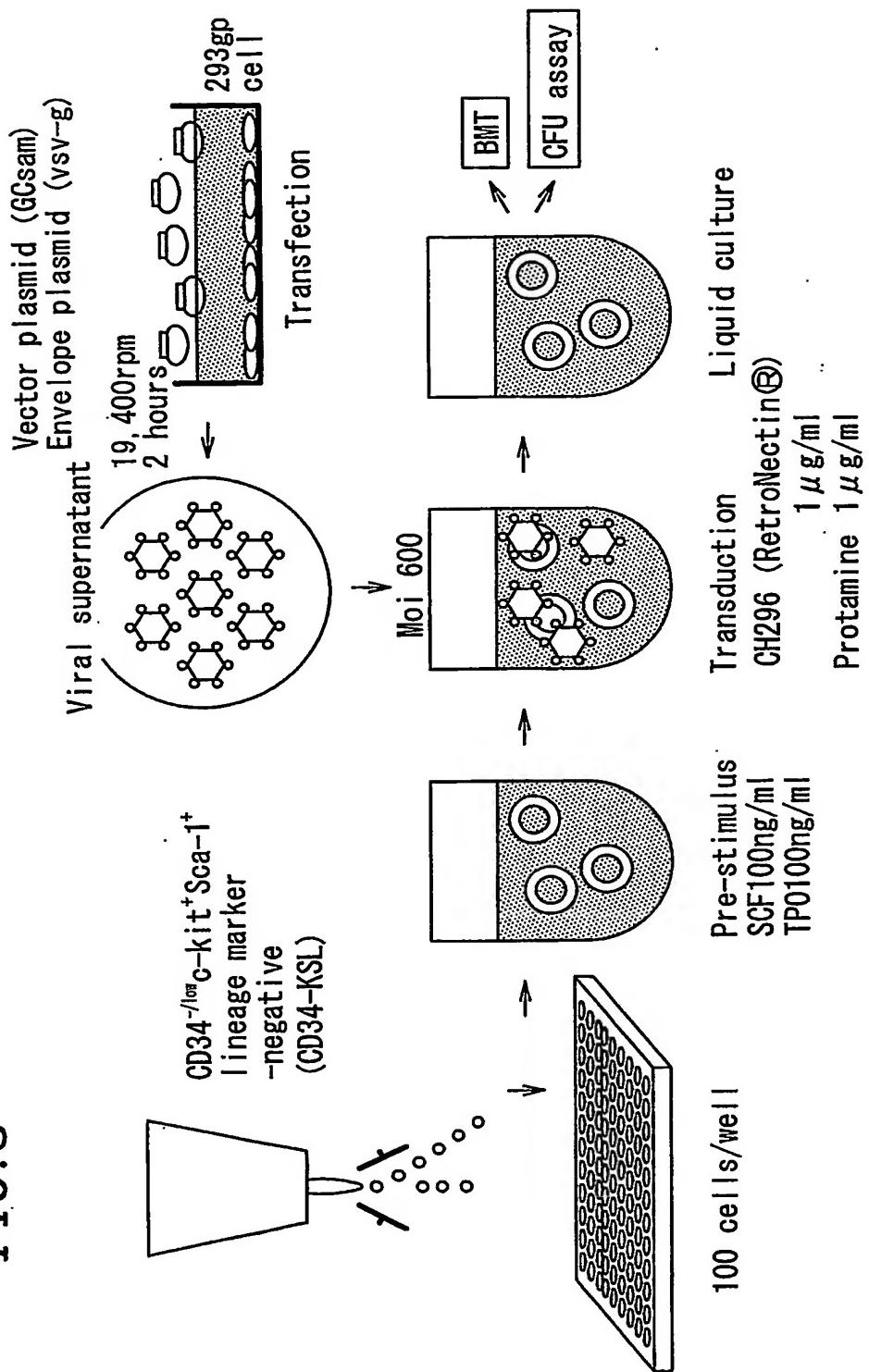
Active STAT

FIG. 2 GCsam STAT ires EGFP



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FIG. 3
Transduction of HSC using retrovirus



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FIG. 4 Growth curves

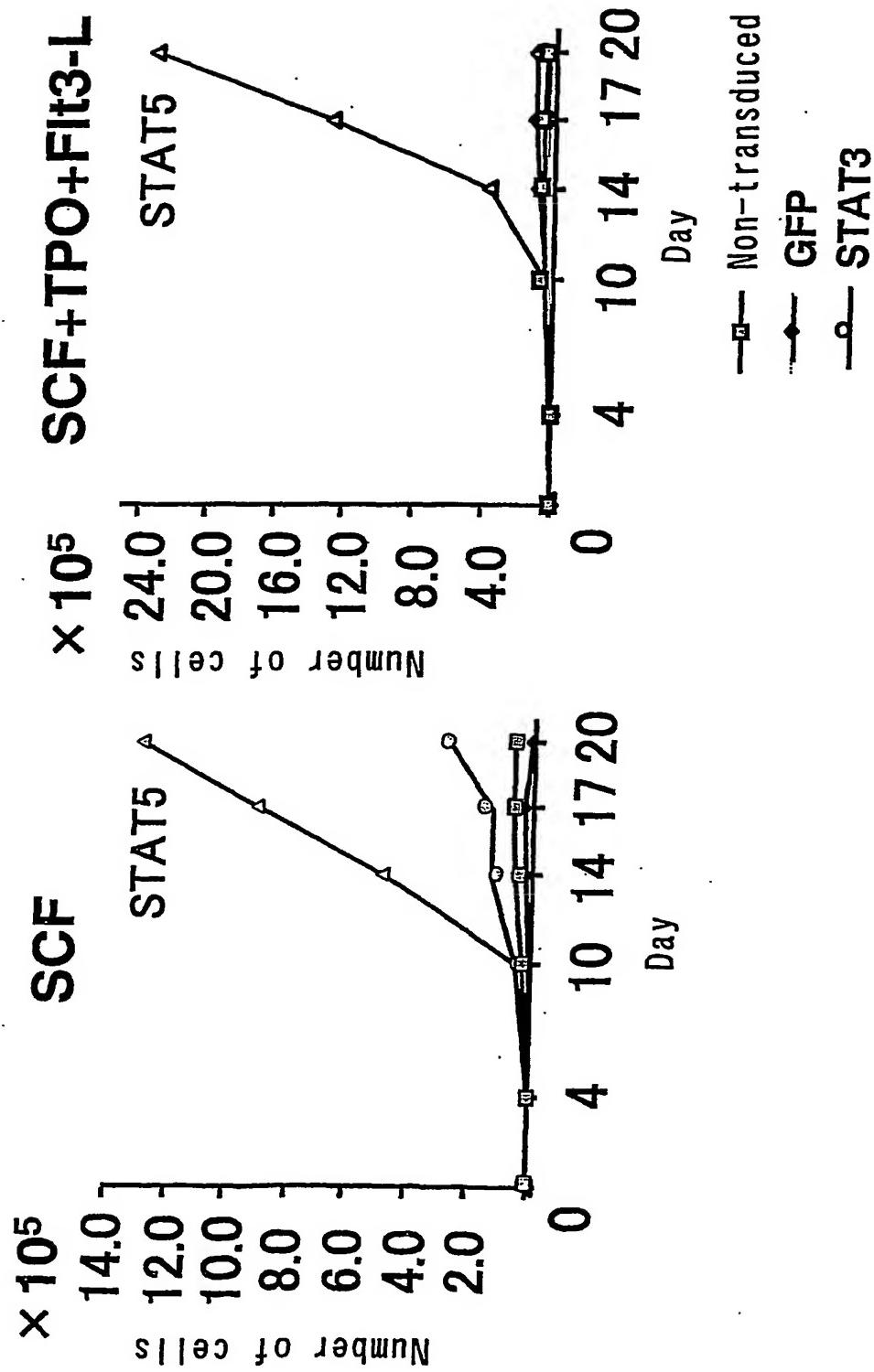


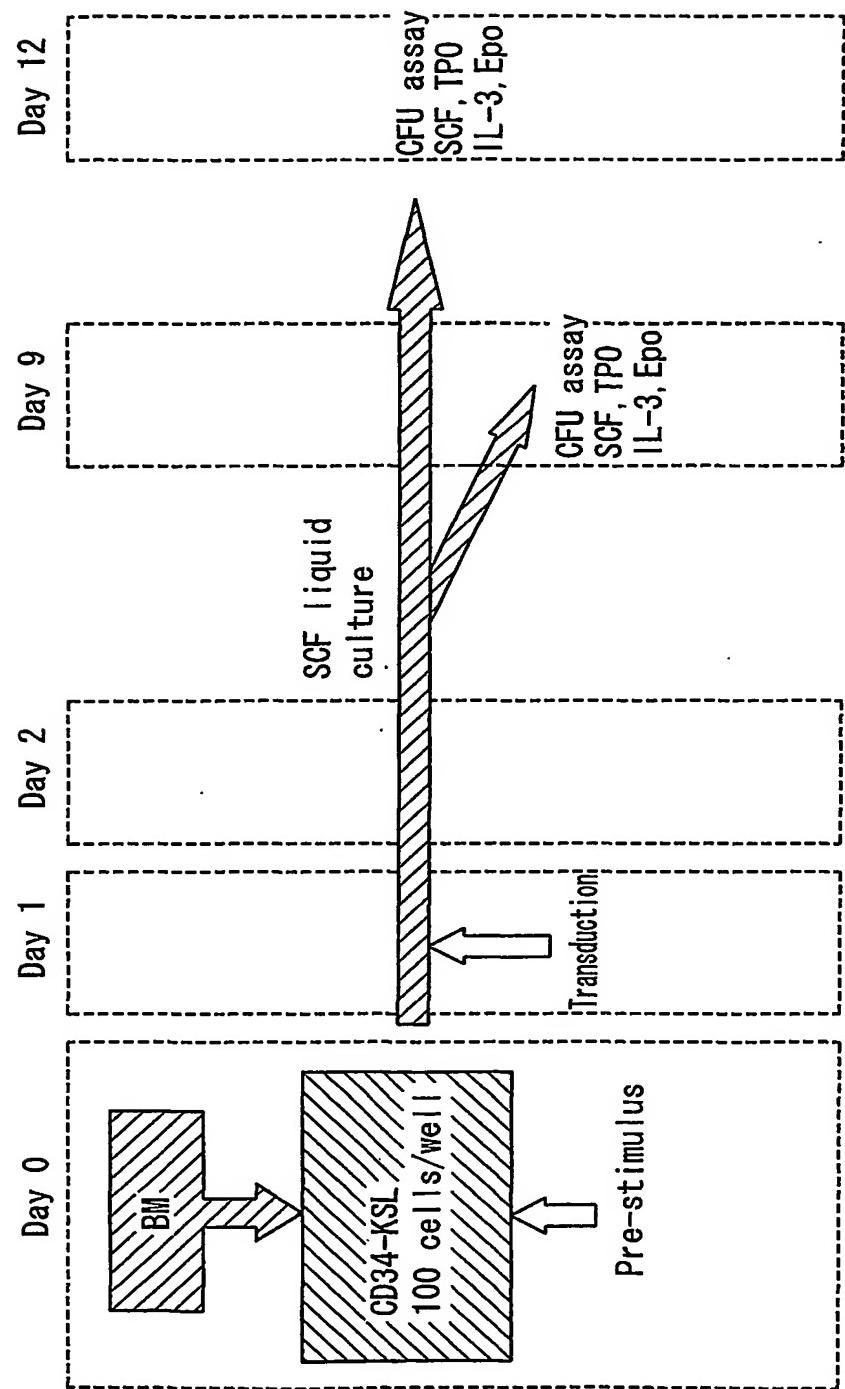
FIG. 5

FIG. 6

Colony assay

Virus	CFU value					
	Day 9		Day 12			
	Per total cells	Per 10 ³	Per total cells	Per 10 ³	HPP	CFCs
GFP	36	42	36	41	48	390
STAT3	12	54	15	65	36	180
STAT5	222	378	8	14	1848	348

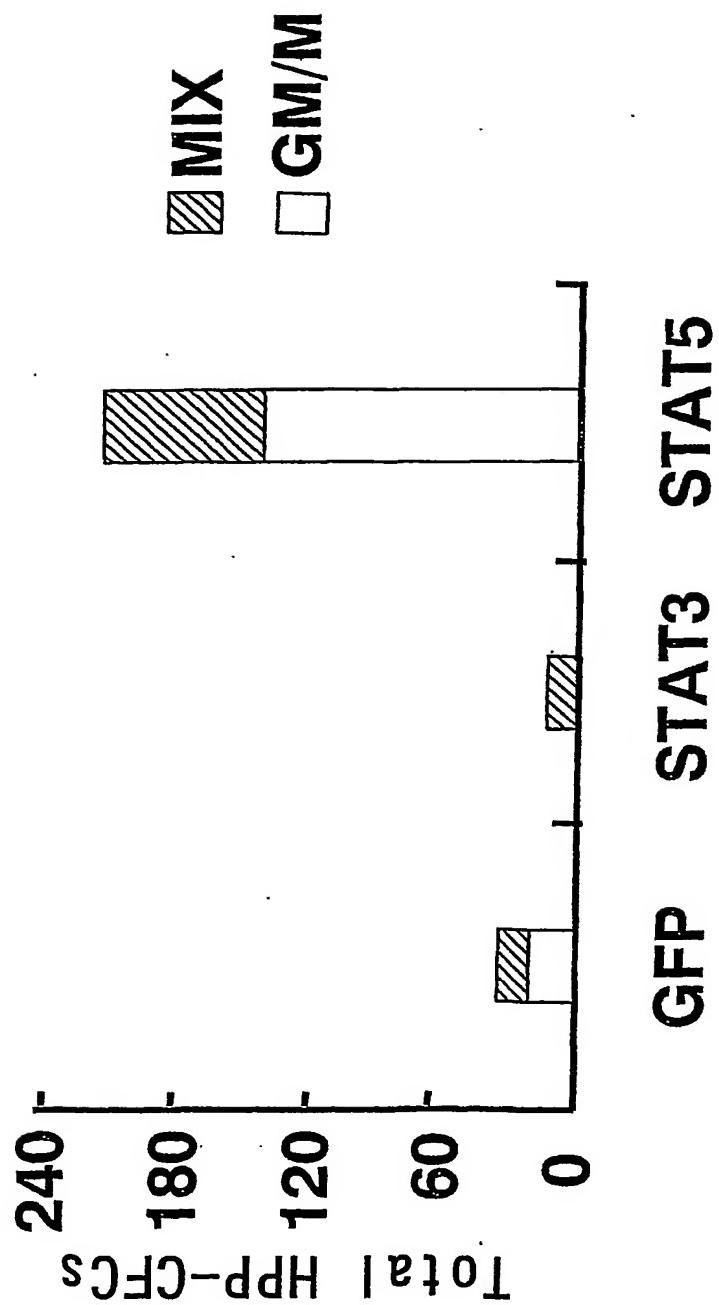
HPP: High Proliferative Colony Forming Cell
 CFC: Colony Forming Cell

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HPP-CFCs

FIG. 7



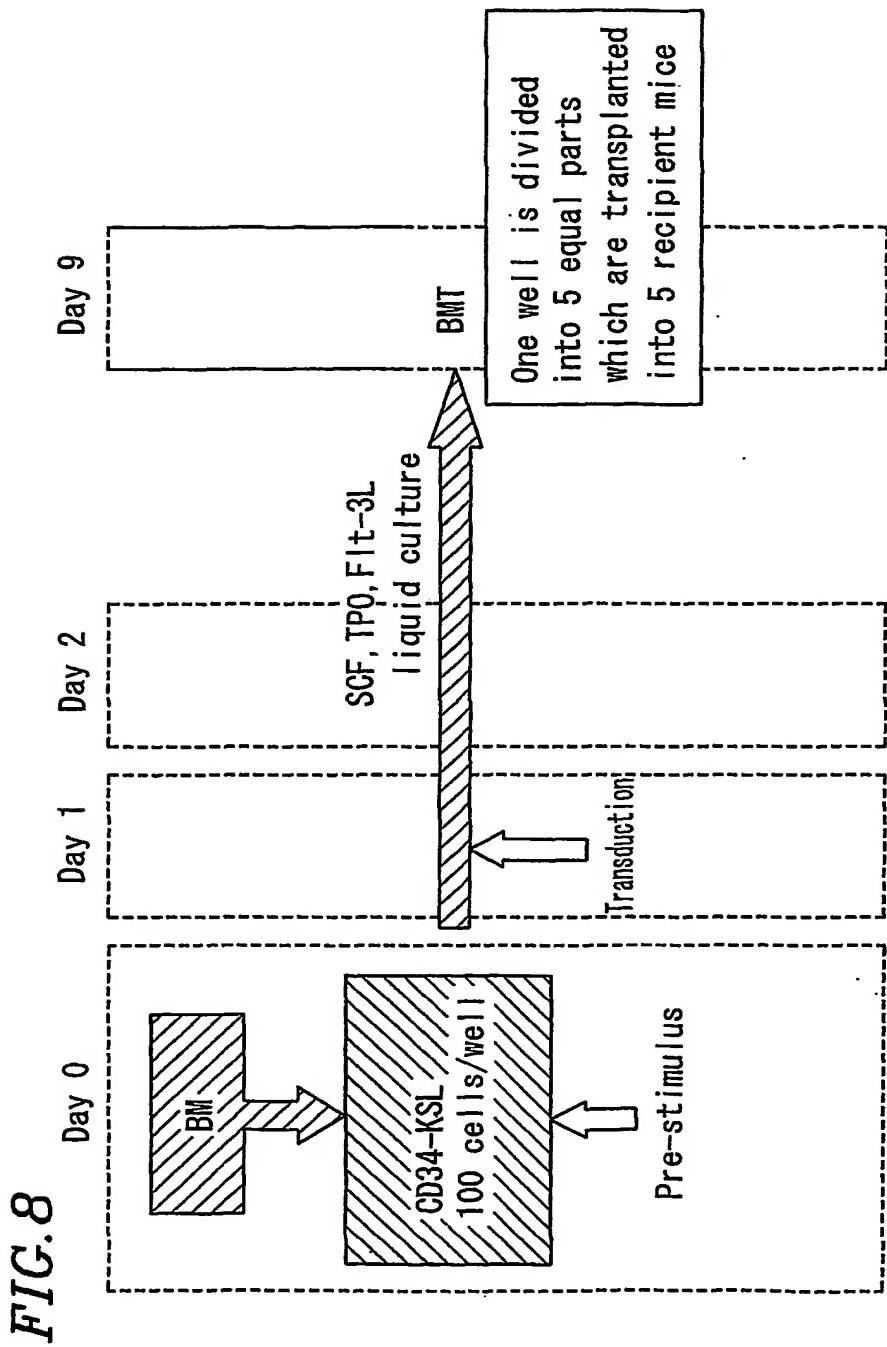


FIG. 9

Reconstruction of lymphocyte and myelocyte by HSC transduced with active STAT5

Agent	Virus	No. HSC	Positive mouse	Total leukocyte	Chimerism %		
					Bone marrow cell	B lymphocyte	T lymphocyte
SCF	GFP	20	0/5	-	-	-	-
	STAT5	20	0/5	-	-	-	-
SCF+TP0	GFP	20	0/4	-	-	-	-
+Flt-3L	STAT5	20	3/3	12.4±9.2 (n=3)	8.9±8.7 (n=3)	0.3±0.2 (n=3)	2.7±3.5 (n=3)